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What Works? Research into Practice

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Research Monograph # 4

Single-Sex Classrooms

By Dr. Serge Demers and Carole Bennett

Can single-sex classrooms help close the achievement gap between boys and girls?

We hear more and more about single-sex classrooms. Traditionally, this mode of teaching was exclusively found in private schools; today, more and more single-sex classes are found in publicly funded schools in Canada and the United States. In the 1980s, single-sex classrooms were introduced in some Ontario schools to address perceived gaps in achievement of girls in mathematics. According to a recent Quebec study, in 2003–04 there were over 250 intervention projects to improve boys' learning. By far, the most common of these interventions was the single-sex classroom.

Boys' academic achievement appears to be a focus of collective concern and since the mid-90s has drawn the interest of many stakeholders in the field of education. Indicators of academic achievement suggest boys lag behind girls in many subject areas. Gender gaps in achievement have been a reality for many decades and can be observed in all the member countries of the Organisation for Economic Co-operation and Development.[1] The reasons underlying the phenomenon are not well understood.[2] To some, the debate represents an overt attack on feminism.

Schooling Difficulties Experienced by Boys

According to many authors, such as Smith and Wilhelm,[3] boys generally achieve lower scores than girls on standardized tests. Overall, differences in scores by subject matter according to gender can be observed in reading and writing, with girls demonstrating higher performance.[4] The observed gap is not a new phenomenon and its range remains noticeably the same for the last 35 years.

Yves Archambault, deploring the lack of action taken to "adapt" Quebec schools to the particular situation of boys, reports that the student drop-out rate for boys is three times higher than for girls; that boys are four times more likely to have behavioural and emotional problems; that they have twice as many referrals to youth centres; that they have a six times higher incidence rate of hyperactivity, twice as many cases of autism, and are six times more likely to develop schizophrenia during the teenage years.[5] In jurisdictions around the world, boys have higher rates of academic suspensions and expulsions as well as ADHD diagnosis.

Boys have systematically higher drop-out rates. In 2004–05, 12 percent of young men dropped out of high school compared with 7 percent for young women.[6] However, it should be noted that the drop-out problem is a complex and multi-dimensional issue not limited to gender.

Achieving Success for All Students

Research suggests promising directions for the changes necessary to improve learning and success rates for all students, with a specific focus on boys' achievement. Here are some of the most frequently proposed suggestions:

- Focus on increasing students' intrinsic motivation
- Diversify teaching practices
- Ensure attention in initial teacher education to preparing teacher candidates to differentiate their instruction to address boys' learning needs

Although recommended by some, single-sex classrooms are not the new paradigm for scholastic success.

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In a study of the difficulties experienced by boys in the school setting, Marsolais determined that boys are more active than girls and they require challenges, sports, and electronic games.[1] He concluded that for boys to become involved in school, they need appropriate projects – projects that we may find instinctively different from those we would like to give to girls. Other authors point out the existence of numerous types of masculinity (and femininity) which compels us to avoid generalizations about the "best" teaching strategy for children, regardless of their gender.[2] Marsolais also mentions the importance of partnerships and concludes that the academic success of boys is not merely the concern of a limited circle of people but the concern of the entire school staff; he adds that interventions for youth open the way for new suggestions and initiatives within education.

Research Debate

The Dilemma of Single-Sex Schooling

As with numerous issues in education, single-sex classrooms are the subject of some debate in the field's literature.

The Debate in Brief

Boys have systematically higher drop-out rates but research is not conclusive on the role that single-sex schooling can play in improving boys' learning and graduation rates.

In favour of single-sex schools:

- There are improved graduation rates for some single-sex schools, though success could be attributable to other factors such as teacher motivation or additional resources.

In favour of coeducational schools:

- Boys appear to benefit less from single-sex schooling than girls.

In favour of a hybrid model:

- Boys and girls appear to benefit most by having *some* single-sex classes and *some* activities based on gender.

In favour of single-sex schools: Sociologist Michel Fize calls for a reassessment of the benefits of a fully coeducational system, particularly at adolescence.[3] He points out that over the last 40 years coeducational environments have not eradicated sexism or broken down the silos of virility (considered a male attribute) and sensitivity (an attribute traditionally associated with women). He goes as far as proposing single-sex schools as the new paradigm for scholastic success.

In the United States, the single-sex school is an option typically reserved for affluent families. Lately, various publicly funded schools have taken steps to help students in disadvantaged communities. As an example, the Young Women's Leadership School in East Harlem celebrated its 10th anniversary this year.[4] The school was a source of controversy when it first opened. Approximately 85 percent of the school's population qualifies for free meals, an undeniable sign of the socioeconomic conditions of its clientele. Yet, in spite of this, the school's graduation rate is 100 percent. The National Association for Single-Sex Public Education reports that the number of single-sex publicly funded schools in America increased from 3 in 1995 to over 250 in 2006 – an "astronomical increase."[5] Looking a little closer at the statistics, we observe that only 50 of those schools are single-sex schools; the other 200 cases are single-sex classes identified in coeducational schools (excluding physical education classes).

In favour of coeducational schools: Asselin and Bourret see the separation of boys and girls in the classroom as a short-term solution.[6] Research results provided by Bouchard and St-Amant suggest single-sex education could be more advantageous for girls, because girls would no longer be exposed to sexual harassment or the "troublesome" behaviour of some boys.[7] However, it appears that single-sex school environments could also be detrimental to boys. British and American studies reveal that the establishment of separate structures does not significantly improve boys' learning and academic success rates. In fact, girls appear to be the ones who benefit the most from these structures.

Chouinard emphasizes that positive effects observed in single-sex classes are weak and can hardly be attributed to coeducational environments.[8] It is clear that the "success of the project could be due to a teacher's motivation or to the resources allocated to the project" and not due to coeducation. Bouchard and St-Amant indicate that the introduction of single-sex environments does not improve, by itself, boys' learning and academic success rates.[9] Similarly, the U.S. report "Single-Sex Versus Coeducation Schooling: A Systematic Review" attempts to cast light upon the issue regarding coeducation in publicly funded schools in America through a qualitative and quantitative meta-analysis of the research data.[10] The authors agree on the considerable lack of quality research in the field and the neutral results yielded by the meta-analysis; a comparison of the systems revealed few differences between the two.

In favour of a hybrid model: Others adopt a less radical position. They believe that boys and girls will benefit by engaging, but not exclusively, in some single-sex learning and recreational activities. This would correspond to the natural tendency displayed by boys and girls to mutually exclude each other during a period of time during childhood and adolescence.

Achieving Success for All Students

Implications for Educational Practice

Increase intrinsic motivation: Over the last few years, teachers and students, as well as researchers in the field of education, identified motivation as one of the explanatory causes of academic success or failure.[5] A motivated student will invest more efforts in learning activities and thereby increase his academic achievement.[6] [7] However, it is worth noting that some students achieve success despite all predictors.

The world of education does not lack examples of extrinsic motivation, according to Deci and Ryan[8] working hard to obtain good grades or avoid poor ones, to please parents, friends or teachers. Intrinsic motivation – that is to say the inherent pleasure derived from an activity – is practically absent in the classical education system. Stakeholders within the field have established a series of constraints to control the student's learning process and behaviour, thereby prompting the student to characteristically work at the extrinsic motivation level. An increase in intrinsic motivation will deepen the student's interest in school and contribute to academic success. It is therefore imperative to work at this level of motivation.

Diversify teaching practices: Here are few suggestions that could be used to reduce the existing academic gap between the sexes and increase the overall intrinsic motivation level of students:

- diversify teaching and learning strategies and alternatively focus on girls and boys;
- use different themes for the two sexes;
- provide students with opportunities to move about in class and encourage kinesthetic activities;
- develop activities or significant thematic areas for each of the sexes in the context of a coeducational classroom in order to keep all students motivated;
- develop cross-curricular skills by integrating, for example, reading and writing with other subject matter to recognize their usefulness in daily activities;
- develop appropriate projects that will help students develop a sense of belonging to their school;
- realize that the academic success of students is not merely the concern of a limited circle of people but the concern of the entire school staff – partnerships must therefore be developed;
- provide challenging opportunities and frequently change the type of activities.

It is critical for teachers to realize that not only do boys and girls have different tastes and interests, they also learn differently. An attempt to reach all students must be made in the context of a classroom teeming with a multitude of masculine and feminine traits.

Ensure attention to learning styles in teacher education: Providing current information and up-to-date research results to teachers so they can be better equipped is one of the important challenges the education system faces. To this end, it seems essential for all teacher training institutions and professional development programs to address the different learning styles of both sexes in order to develop efficient and well-balanced strategies.

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